

## Chapter 12 DNA and RNA

## Section Review 12-3

### Reviewing Key Concepts

**Completion** *On the lines provided, complete the following sentences.*

- The three main types of RNA are \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.
- Copying part of a nucleotide sequence of DNA into a complementary sequence in RNA is called \_\_\_\_\_.
- An enzyme that binds to DNA during transcription is RNA \_\_\_\_\_.
- During the process of \_\_\_\_\_, the information carried by mRNA is used to produce proteins.
- Each tRNA molecule contains three unpaired bases, called the \_\_\_\_\_, which ensure that amino acids are added in the correct sequence.

### Reviewing Key Skills

- Comparing and Contrasting** How are DNA and RNA similar? How are they different?  
\_\_\_\_\_  
\_\_\_\_\_

- Comparing and Contrasting** How are the three types of RNA different?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- Hypothesizing** How would it benefit a cell to possess a sequence of DNA that could be transcribed and then edited into several different mRNA molecules?  
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\_\_\_\_\_  
\_\_\_\_\_

- Applying Concepts** What amino acid sequence would be produced from the mRNA sequence CGCUAUAGC?  
\_\_\_\_\_  
\_\_\_\_\_

- Applying Concepts** Suppose the DNA sequence GCTATATCG was changed to GCGATATCG. How would the products of transcription and translation be affected?  
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\_\_\_\_\_